

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Rule 1.53(b) Continuing Application of:)
Gabriele GOVONI, *et al.*)
Parent Serial No.: 08/943,748) Parent Examiner: H. Tran
Parent Filed: October 3, 1997) Parent Art Unit: 1764
For: **PROCESS AND APPARATUS FOR THE**)
GAS-PHASE POLYMERIZATION)
OF ALPHA-OLEFINS)

New York, New York
December 14, 2001

PRELIMINARY AMENDMENT

Box Patent Application
Commissioner For Patents
Washington, DC 20231

Sir:

This Preliminary Amendment is filed concurrently with the above-identified application. It is believed that no fee is due. If it is determined that a fee is due, please charge such fee to Deposit Account No. 02-4467. A duplicate copy of this sheet is enclosed.

Please amend the application as follows:

IN THE SPECIFICATION

In accordance with amendment practice pursuant to Rule 1.121(b)(1)(i) and 1.121(b)(1)(ii), on page 13 of the specification, please delete the paragraph beginning with "Referring to Fig. 1 ..." and replace with the paragraph presented below:

Referring to Fig. 1, the growing polymer flows through the first polymerization zone 1 under fast fluidization conditions along the direction of the

arrow 14; in the second polymerization zone 2, the growing polymer flows in a densified form under the action of gravity along the direction of the arrow 14'. The two polymerization zones 1 and 2 are appropriately interconnected by the sections 3 and 5. The material balance is maintained by feeding in monomers and catalysts and discharging polymer (line 11).

A "marked up" version of the paragraph is attached hereto as Exhibit 1 pursuant to Rule 1.121(b)(1)(iii).

IN THE CLAIMS

Please cancel claims 1-34, without prejudice.

Please add the following claims:

--35. An apparatus for preparing a polymer comprising a reactor vessel having a first reactor chamber having first and second connection portions and a second reactor chamber having first and second connection portions, the first connection portion of each reactor chamber being positioned at a position above the second connection portion of each reactor chamber, and the first reactor chamber first connection portion being connected to the second reactor chamber first connection portion and the first reactor chamber second connection portion being connected to the second reactor chamber second connection portion for fluid communication between the first and second reactor chambers, the vessel having an inlet for supplying a monomer to the vessel and first reactor chamber and an outlet for discharging a polymer from the vessel and second reactor chamber, and having a solid/gas separator connected to the second reactor chamber and a recirculation line that connects the solid/gas separator to the first reactor chamber at a position below and separate from the second connection portion of the first reaction chamber.

36. An apparatus for preparing a polymer comprising a reactor vessel having a first reactor chamber having first and second connection portions and a second reactor chamber having first and second connection portions, the first reactor chamber first connection portion being directly connected to the second reactor chamber first connection portion and the first reactor chamber second connection portion being connected to the second reactor chamber second connection portion for fluid communication between the first and second reactor chambers, the vessel having an inlet for supplying a monomer to the vessel and first reactor chamber and an outlet for discharging a polymer from the vessel and second reactor chamber, and having a solid/gas separator connected to the second reactor chamber and a recirculation line that connects the solid/gas separator to the first reactor chamber.

37. An apparatus for preparing a polymer comprising a reactor vessel having a first reactor chamber having first and second connection portions and a second reactor chamber having first and second connection portions, the first connection portion of each reactor chamber being positioned at a position above the second connection portion of each reactor chamber, and the first reactor chamber first connection portion being connected to the second reactor chamber first connection portion and the first reactor chamber second connection portion being connected to the second reactor chamber second connection portion for fluid communication between the first and second reactor chambers, the vessel having an inlet for supplying a monomer to the vessel and first reactor chamber and an outlet for discharging a polymer from the vessel and second reactor chamber, and having a solid/gas separator connected to the second reactor chamber and a recirculation line that connects the solid/gas separator to the first reactor chamber at a position separate from the inlet.

38. An apparatus for preparing a polymer comprising a reactor vessel having a first reactor chamber having first and second connection portions and a second reactor chamber having first and second connection portions and excluding a gas fluidization line to the second chamber, the first reactor chamber first connection portion being connected to the second reactor chamber first connection portion and the first reactor chamber second connection portion being connected to the second reactor chamber second connection portion for fluid communication between the first and second reactor chambers, the vessel having an inlet for supplying a monomer to the vessel and first reactor chamber and an outlet for discharging a polymer from the vessel and second reactor chamber, and having a solid/gas separator connected to the second reactor chamber and a recirculation line that connects the solid/gas separator to the first reactor chamber.

39. An apparatus for preparing a polymer comprising a reactor vessel having a first reactor chamber having first and second connection portions and a second reactor chamber having first and second connection portions, and the first reactor chamber first connection portion being connected to the second reactor chamber first connection portion and the first reactor chamber second connection portion being connected to the second reactor chamber second connection portion for fluid communication between the first and second reactor chambers, the vessel having an inlet for supplying a monomer to the vessel and first reactor chamber and an outlet for discharging a polymer from the vessel and second reactor chamber, and having a solid/gas separator connected to the second reactor chamber and a recirculation line that connects the solid/gas separator to the first reactor chamber, wherein in the second reactor chamber, no gas inlet is provided that is fit to establish therein an upward gas flow.--

REMARKS

The specification has been amended on page 13, to indicate that the line labeled "11" is for discharging polymer from the apparatus. Support for this amendment is found in the specification at, for example, page 13, lines 17-30 and Figure 1.

Please cancel claims 1-34, without prejudice.

Claim 35 has been added. Support for this claim is found in the specification at, for example, page 11, line 11, to page 12, line 7; page 13, line 17, to page 14, line 7; page 14, lines 19-21; page 17, lines 9-16; page 17, line 23, to page 18, line 1; and in Figures 1-3.

Claim 36 has been added. Support for this claim is found in the specification at, for example, page 11, line 11 to page 12, line 7; page 13, line 17, to page 14, line 7; pages 14, lines 19-21; page 17, lines 9-16; page 17, line 23, to page 18, line 1; and in Figure 3.

Claim 37 has been added. Support for this claim is found in the specification at, for example, page 11, line 11, to page 12, line 7; page 13, line 17, to page 14, line 7; pages 14, lines 19-21; page 17, lines 9-16; page 17, line 23, to page 18, line 1; and in Figure 3.

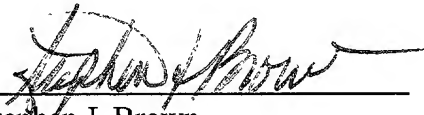
Claim 38 has been added. Support for this claim is found in the specification at, for example, page 11, line 11, to page 12, line 7; page 13, line 17, to page 14, line 7; pages 14, lines 19-21; page 17, lines 9-16; page 17, line 23, to page 18, line 1; and in Figure 2.

Claim 39 has been added. Support for this claim is found in the specification at, for example, page 11, line 11 to page 12, line 7; page 13, line 17, to page 14, line 7; pages 14, lines 19-21; page 17, lines 9-16; page 17, line 23, to page 18, line 1; and in Figure 2.

It is submitted that no new matter has been introduced by the foregoing amendments. Approval and entry of the amendments is respectfully solicited.

In view of the foregoing, favorable action on the merits including entry of the amendments, and allowance of all the claims, respectfully, is requested. If the Examiner has any questions regarding this paper, please contact the undersigned attorney.

Respectfully submitted,

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FILED

“Marked Up” Amendment to Specification Pursuant to Rule 1.121(b)

(PROPOSED AMENDMENTS ARE BOLDFACED FOR IDENTIFICATION ONLY)

On page 13 of the specification delete the paragraph beginning with “Referring to Fig. 1 ...” and replace it with the following:

Referring to Fig. 1, the growing polymer flows through the first polymerization zone 1 under fast fluidization conditions along the direction of the arrow 14; in the second polymerization zone 2, the growing polymer flows in a densified form under the action of gravity along the direction of the arrow 14'. The two polymerization zones 1 and 2 are appropriately interconnected by the sections 3 and 5. The material balance is maintained by feeding in monomers and catalysts and discharging polymer **(line 11)**.

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